NEW NORTH AMERICAN FUNGI.

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Typhula subfasciculata.

On bark of dead elm, London, Canada, Dec., 1889. J. Dearness, 1245. Subfasciculate, 2–3 together or single, cylindrical, curved, 1–2 mm. high, white-farinose, contracted above into a pointed, rather darker colored apex. Basidia 15–25 μ. long with a rounded obtuse head 6–8 μ. diam. and a cylindrical base 5–6 μ. diam. Spores not satisfactorily made out, apparently small, 3 x 2 μ.

Stereum atrorubrum.

On old logs, British Columbia, May, 1889. Macoun, No. 86. Fan-shaped or reniform, 1–3 cm. broad and long, coriaceous, thin, narrowed behind into a sessile base, yellow at first (about the same color as *S. complicatum*) and tomentose pubescent with a few narrow faint zones, but when mature of a dull dark red (about the color of the pileus of *Pol. lucidus*) with the surface glabrous and densely radiate-rugose, margin lobed and crisped and in some specimens, proliferous, young hymenium yellow, becoming when old nearly brick color when moist, paler when dry. In the mature state the 3–5 concentric zones are more distinct and slightly elevated. The specimens roll up in drying and become hard and brittle.

Hymenochaete rugispora.

On charred wood of *Abies Douglasii*, British Columbia, May, 1889. Macoun, No. 94. Subpeltate, umber color throughout, margin divided into numerous small ($\frac{1}{2}$ cm. broad) pilei which are partly reflexed and tomentose, thick (2–3 mm.), firm, uneven (colliculose), often two or more confluent, forming a patch 5 cm. or more across. Hymenium of vertically-fibrous structure, bristles subcylindrical, 100–150 x 7–8 μ. slightly thickened, roughish and obtuse above. Spores oblong with an oblique apiculus subhyaline at first, becoming rusty-brown, wrinkled, 6–8 x 3 μ.

Asterina rubicola.

On living leaves of *Rubus occidentalis*, London, Canada, Sept., 1889. J. Dearness 712. Spots rusty yellow-brown, indefinite, paler below, confluent over large areas of the leaf. Perithecia epiphyllous, solitary or 2–4 connate, depressed-hemispherical, pierced above, black, 75–80 μ. diam. Asci oblong, sessile 35–45 x 12–15 μ. with

abundant obscure paraphyses. Sporidia biseriate, ovate-elliptical yellowish-brown, 12–15 x 6–8 μ. rounded at the ends, 1–septate and constricted.

Asterina bignoniae.

On living leaves of *Bignonia capreolata*, St. Martinsville, La., Feb., 1889. Langlois, 2225. Hypophyllous, perithecia gregarious or scattered, depressed-globose, 115–125 μ. diam. roughish, black; ostiolum papilliform. Mycelium very scarce or wanting. Asci obovate, 20 x 15 μ. finally elongated-pyriform 30 x 15 μ. Sporidia crowded, oblong, 1–septate, 12 x 4 μ. hyaline, obtuse, slightly constricted (becoming brown)? On account of the subglobose perithecia and the absence of any radiate-fibrous structure this might be placed in *Dimerosporium*.

Chætomium pusillum. N. A. F. 2350.

On basswood bottom of a barrel standing in a cellar at Newfield, N. J., July, 1889. Found also at Manhattan, Kansas, on an old churn in a cellar, March, 1889. (Kellerman 1437.) Perithecia gregarious, black membranaceous, about 150 μ. diam. and 200 μ. high, the lower part clothed with fine loosely-entangled, pale slate-colored, branching hairs; upper part of the perithecia clothed more sparingly with longer, darker, mostly simple, spreading hairs which are partially transparent and continuous or very faintly septate, about 3 μ. thick at base, tapering nearly to a point. Asci narrow-cylindrical, 30 x 3½ μ. (p. sp.), without paraphyses. Sporidia uniseriate, elliptical, brown, 3½–4½ x 2½–3 μ. The asci soon disappear and the spores are expelled in a cylindrical mass ½–¾ mm. long, carrying along with it the ruptured upper half of the perithecium clothed with its spreading hairs.

C. sphærospermum, C. & E. has this same habit, and otherwise much resembles this, but has the terminal hairs more or less branched and coarser (5–6 μ. thick below) and the sporidia globose, 6–7 μ. with brown subglobose 3–3½ μ. conidia. We have not seen the asci in *C. sphærospermum* but from the form of the spore-clusters they appear to be obovate.

Myriococcum consimile.

On the basswood bottom and elm hoops of a barrel standing in the cellar, Newfield, N. J., July, 1889. Perithecia gregarious, globose, 80–100 μ. diam. carbonaceo-membranaceous, black, collapsing, pierced with a small, round opening above, filled with olivaceous,

oblong 4–4½ x 1½ μ. sporules without any evident basidia. The upper half finely radiate-striate, texture close, fine radiate-cellular. The perithecia are enveloped in a loose, glauco-cinereous mycelium of the same color and character as that in *M. Everhartii* from which this differs in its smaller sporules and smaller striate perithecia with an apical opening.

Calosphaeria alnicola.

On dead alder, Newfield, N. J., March, 1889. Subcuticular, Perithecia scattered, subglobose, ½ mm. diam., roughish, seated on the surface of the inner bark, at length slightly collapsed above. Ostiola short-cylindrical, slightly raising and barely perforating the epidermis. Asci racemose-fasciculate, clavate-oblong, 20–22 x 3½–4 μ., 8–spored, the upper end of the spore-mass truncate and surmounted by the empty transparent, dome-shaped apex of the asci. Spores crowded-biseriate, allantoid, curved, 5–6 x 1 μ.

When the epidermis is peeled off the perithecia either adhere to it or remain attached to the inner surface of the bark, in which respect this differs from *Sphaeria secreta*, C. & E. in which the perithecia always adhere to the epidermis. This latter species also has longer distinctly clavate asci with a long, slender base and longer sporidia and is we believe specifically distinct from the species on alder though much resembling it.

Calosphaeria microsperma E. & E.

On *Carpinus Americana*, London, Canada, Apr., 1890. Dearness, 1587. Perithecia subcuticular, circinate, 6–18 together, about ½ mm. diam., their cylindrical necks converging and erumpent in a small compact fascicle of short ostiola projecting but slightly and mostly 4–sulcate. Asci clavate 22–25 x 4 μ. gradually attenuated to a slender base, paraphyses much longer than the asci. Sporidia minute, 3½ x ¾ μ. curved into a semicircle.

Coelosphaeria corticata.

On bark of dead *Maclura aurantiaca*, Emma, Mo., Nov., 1889. Rev. C. H. Demetrio, 272. Perithecia scattered, globose, about ½ mm. diam. closely enveloped except the papilliform ostiolum and the apex by the adherent epidermis, and clothed with a thin coat of brown, branching, sparingly septate hairs about 3 μ. thick. Asci (p. sp.) about 35 x 7 μ. 8-spored. Sporidia crowded biseriate, 2-nucleate, hyaline, moderately curved, obtuse, 10–14 x 3 μ. The

perithecia soon collapse down to or a little beyond the part embraced by the epidermis and become strongly concave.

Diaporthe nivosa, Ell. & Holw.

On dead alders. Isle Royale, Lake Superior, July, 1889. E. W. D. Holway. Perithecia mostly 8–12, about ¾ mm. diam. subcircinate, buried in the unaltered substance of the bark which is raised in a pustulate manner over them, contracted above into short necks with black subhemispherical papilliform ostiola erumpent around the margin of a snow-white disk rather less than 1mm. in diam. having the same general appearance as *V. nivea* Fr. Asci (p. sp.) about 60 x 12 μ. Sporidia subbiseriate, oblong, 4–nucleate, 1–septate, constricted, 12–16 x 3–4 μ. straight or very slightly curved. There is no black circumscribing line around the stroma.

Valsa floriformis.

On dead limbs of *Populus monilifera,* near Concordia, Mo., Oct. 1887. Rev. C. H. Demetrio, No. 13. Stroma conic-hemispherical, about 2 mm. broad and 1½ mm. high seated on the inner bark and covered by the epidermis which is either simply pierced or sublaciniately ruptured by the thick fascicle of cylindrical (1 mm. or more long) somewhat spreading, rather obtusely pointed ostiola, swollen just below the tip and erumpent through a yellowish disk which is soon obliterated. Perithecia numerous (25–50) packed in a single layer in the lower part of the stroma, 1 x ¾ mm. diam. ovate or irregular from compression, contracted above into slender necks which rise through the cinereous contents of the stroma and terminate above in the cylindrical ostiola. Asci (p. sp.) 35–40 x 5 μ. Sporidia biseriate, cylindrical, hyaline, slightly curved 6–7 x 1½ μ. eight in an ascus. Differs from *V. verrucula,* Nits. in its long ostiola and smaller asci and sporidia. Has much the same general appearance as *V. scoparia,* Schw. but ostiola not sulcate and asci and sporidia larger.

Valsa glandulosa, Cke.

According to the description of this species in Grev. VII, p. 52, the ostiola are not sulcate. The specimens distributed in N. A. F. 2343 on bark of *Ailanthus* from Kentucky have the ostiola distinctly 4–5 sulcate, so also the specimens sent from Ohio by Mr. Morgan and from Staten Island, N. Y., by Mrs. E. G. Britton. An examination of the specimen in Rav. F. Am. 661 shows that they also have the ostiola sulcate. This species must then be placed in the

subgenus *Eutypella*. The minute (3½–4½ x 1 μ.) sporidia distinguish it from *V. ventriosa* C. & E. In Grevillea 18, p. 86. Cooke has published the Staten Island specimens as a new species "*Valsa clavulata* Cke.," but at most this is only a robust form of *V. glandulosa* Cke. which, as distributed in Rav. F. Am., certainly has the ostiola sulcate as stated above.

Valsa (Eutypella) canodisca, Ell. & Holway.

On dead branches of *Salix*, Decorah, Iowa, May, 1886. E. W. D. Holway. Stroma depressed-hemispheric, 1½–2 mm. diam. flattened above and covered by a circular blackish-gray definitely limited disk 1–1½ mm. diam. and pierced in the center by the fascicle of deeply 4–sulcate ostiola. Perithecia 6–15 in a stroma, seated on the surface of the subjacent wood, ovoid or subangular from mutual pressure, ¼–⅓ mm. diam. with thick black walls and contracted above into short converging necks with quadrisulcate ostiola collected in a slightly erumpent fascicle in the center of the disk. The upper part of the stroma around and between the necks of the perithecia is filled with whitish, grumous matter. Asci about 100 μ. long including the slender base (p. sp. 50 x 10–12 μ.). Paraphyses filiform, abundant. Sporidia eight in an ascus, allantoid, yellowish, moderately curved 12–18 x 3½–4 μ. The stromata are often confluent. The wood beneath is marked by a distinct black circumscribing line. The circular, flat, grayish-black disk is a distinguishing character.

Pseudovalsa stylospora, E. & E.

On bark of dead *Acer spicatum*, London, Canada, March, 1889. J. Dearness, 1506 (B.). Stroma cortical, convex 2–3 mm. diam. covered by the epidermis. Perithecia circinate 4–8 in a stroma, globose, ¾ mm. diam. collapsing when dry, contracted above into short necks, terminated by small, globose ostiola, subseriately arranged and erumpent through a small crack in the bark. Asci (p. sp.) 80–85 x 15 μ. Sporidia biseriate, oblong-elliptical, hyaline and granular at first, becoming brown and 2–septate and slightly constricted at the septa, 25–30 x 10–14 μ. Pycnidia central bearing cylindrical 3–septate, hyaline stylospores 40–55 x 10–12 μ. on short basidia.

Thyridaria fraxini E. & E.

On bark of dead *Fraxinus*, London, Canada, Jan. and March, 1890. Dearness, 1371 and 1496. Perithecia thickly scattered, buried in and almost filling the bark which is uniformly blackened on the inner surface, globose ½–¾ mm. diam. coriaceous with thick

walls, black and shining inside, contracted above into a short neck terminated by an erumpent subhemispheric-tuberculiform ostiolum more or less distinctly radiate-sulcate. Asci with a slender base, 90–100 x 15–20 μ. polysporous. Paraphyses obscure. Sporidia biseriate, vermiform, brown, 3–6 septate, 20–26 x 4 μ. The central septum is distinct, the others fainter. Spermogonia (*Cytisporina Fraxini*) central. Sporules filiform, curved, 40 μ. long. Near *T incrustans*, Sacc.

Cryptovalsa sparsa, E. & E.

On dead oak limbs, St. Martinsville, La., Feb., 1890. Langlois, 2207. Perithecia mostly only 1–4 in a stroma $\frac{1}{3}$ mm. diam. buried in the inner bark with only a faint circumscribing line which does not penetrate the wood, with thick coriaceous walls, black and shining inside, attenuated above into short necks terminating in more or less distinctly quadrisulcate ostiola erumpent in a small pustuliform disk but scarcely projecting above it. Asci (p. sp.) 70–75 x 8–10 μ. polysporous, with a slender base and accompanied by paraphyses. Sporidia allantoid, yellowish, moderately curved, with a nucleus in each end, 6–7 x $1\frac{1}{2}$ μ.

Diatrype macounii.

On maple bark (*Acer rubrum*)? Agassiz, British Columbia, May, 1889. Macoun, No. 127. Stroma discoid, gray, 3–4, mm. across and about one mm. thick, suborbicular or subelliptical, seated on the surface of the inner bark and loosely embraced by the upturned ruptured epidermis, circumscribed by a distinct black line which penetrates the bark and stains the surface of the subjacent wood but does not penetrate it. Perithecia numerous, 30–50, in a single layer, ovate-globose, $\frac{1}{4}$–$\frac{1}{3}$ mm. diam. contracted above into a short neck terminating in a small, indistinctly radiate-cleft black ostiolum which is in a slight depression of the stroma. Asci (p. sp. 20–30 x 3 μ.) or including the thread-like base, 50–60 μ. long. Sporidia biseriate above, allantoid, yellowish, slightly curved 4–6 x $\frac{3}{4}$–1 μ. Substance of the stroma dirty white inside.

Diatrype hochelagæ.

On decorticated elm wood, London, Canada, March, 1890. J. Dearness. Stroma orbicular or elongated, 2–3 mm. long and 1–2 mm. wide, often more or less confluent, pulvinate-verrucose with the margin abrupt or slanting off at the ends, with a faint circumscribing black line which does not penetrate deeply into the wood, dull

black outside, dirty white within. Perithecia crowded in the stroma, subglobose, about ½ mm. diam. with thick, black coriaceous walls. Ostiola conic-hemispherical, deeply 4–5-sulcate cleft. Asci (p. sp.) 40–45 x 7–8 μ. with stout paraphyses and allantoid yellowish, moderately curved 8–12 x 2½ μ. sporidia. Resembles outwardly *Diatrypella quercina*, var. *lignicola*, C. & E. Specific name from Hochelaga, an Indian name for the St. Lawrence River.

Diatrypella vitis.

On dead vines of *Vitis bipinnata*, Bayou Chene, La., Oct., 1888. Rev. A. B. Langlois, 1508. Stromata, tuberculiform-hemispherical, about 1 mm. diam. erumpent-superficial, black inside. Perithecia 1–4 in a stroma, globose ½ mm. diam. black and shining within, contracted above into a short neck. Ostiola scarcely prominent, quadrisulcate. Asci polysporus, 75–80 x 10–12 μ. clavate-cylindrical, rather abruptly contracted below into a stipitate base and surrounded by obscure paraphyses. Sporidia allantoid, yellowish-hyaline, 6–7 x 1½ μ. not strongly curved. The surface of the wood beneath the stromata as well as the inner surface of the bark is marked with a black circumscribing line.

Diatrypella demetrionis.

On dead limbs of *Salix chlorophylla* in a wet mountain valley, Colorado, July, 1888. Rev. C. H. Demetrio, No. 205. Stroma pulvinate, depressed-hemispheric, orbicular, slate-black, 1½–2 mm. diam. penetrating to the wood which is marked with a black circumscribing line, closely embraced by the superficial layer of the bark which forms a narrow adnate margin; inner substance whitish. Ostiola only slightly prominent, distinctly but not deeply radiate cleft. Perithecia of medium size, globose or angular from mutual pressure. Asci slender-clavate 75–80 μ. long (p. sp. 35 x 6 μ.). Sporidia crowded, pale yellowish in the mass, nearly hyaline when separated, minute, allantoid, slightly curved, about 4–5 x 1–1¼ μ.

This comes near *D. exigua*, Winter, which is also on willow limbs but that species is said to have the stroma very small ("minutissimis") and the sporidia 8 x 1½ μ. In the Colorado specimens we found no sporidia over 5 μ. long and mostly only about 4 μ. The general appearance is almost exactly that of *Diatrype disciformis*.

Ceratostomella mali.

On inner surface of loose hanging bark of partly dead apple trees, Newfield, N. J., Dec., 1889. Perithecia scattered, membran-

aceous, globose, 400 μ. diam. barely covered by the bark which is slightly raised above them and pierced by the short-cylindrical, obtuse 150 x 75 μ. ostiolum with a rather large round opening at its apex. Asci clavate, subtruncate above and narrowed gradually to the acute base, about 40 x 5 μ. 8–spored. Paraphyses none. Sporidia biseriate oblong-cylindrical, scarcely curved, faintly 2–nucleate, 6–8 x 1½ μ. Differs from *C. dispersa*, Karst. in its rather smaller straight bald ostiolum.

Ceratostoma juniperinum.

On a wounded dead place on a limb of *Juniperus Virginiana*. Flatbush, Long Island. Rev. J. L. Zabriskie. Perithecia gregarious, awl-shaped, black, 700–800 μ. high, slightly enlarged at the tip, swollen and about 150 μ. thick below. Asci included in the ovate-swollen base, oblong-elliptical, about 12 x 6 μ. with a slender base 12–15 μ. long. Sporidia crowded-biseriate, ovate-globose, brown, 4 x 3½ μ. or a little less. The sporidia exude and form a little brown head at the apex of the perithecia thus giving the appearance of a *Calicium*.

Ceratostoma parasiticum.

On old *Fomes applanatus*, West Chester, Pa., June 28th, 1889. Gregarious, membranaceous, subhemispherical, ⅓ mm. diam. reddish-brown becoming slaty-black, prolonged above into a stout beak 2–2½ mm. long, 150 μ. thick below, narrowing to about 75 μ. at the paler, subfimbriate tip. Asci oblong-ovate, (p. sp.) about 20–25 x 7–8 μ. Sporidia crowded, acutely elliptical, hyaline becoming dark, 7–8 x 4½–5 μ. The asci and sporidia often ooze out at the tip of the long beak or ostiolum and form a dark colored globule which inclines to flatten out and thus gives the appearance of an enlarged truncate tip.

Specimens of *Periconia sphœrophila* Pk. found by Mr. Meschutt in Northern New Jersey and by Miss Minns in New Hampshire are ascigerous and much resemble this.

Ceratostoma conicum.

On rotten pine logs, Newfield, N. J., July, 1889. Perithecia immersed or subsuperficial by the falling away of the surrounding wood, gregarious, subovate, about ½ mm. diam., rough, prolonged above into a conical rough ostiolum projecting above the surface of the wood and finally elongated to about 1 mm. in length. Asci 75–80 x 8 μ. (p. sp.) with stout lance pointed paraphyses much longer

than the asci. Sporidia biseriate, oblong-fusoid, yellowish-hyaline, about 5–nucleate, straight, 18–20 x 3 μ.

Rosellinia albolanata.

On old rails, Emma, Mo., Nov. 1889. Rev. C. H. Demetrio, 269. Perithecia subseriate, erumpent, the lower part remaining sunk in the wood, about 1 mm. diam. clothed except the black papilliform ostiolum with a thin, white, farinose coating which finally disappears, bicorticate, outer wall carbonaceous, inner submembranaceous. Asci cylindrical, about 100 x 10 μ. Sporidia uniseriate, elliptical, 12–16 x 7–10 μ. Found also bursting through the bark on dead Salix limbs, at Mill Creek, near Sheridan, Montana, Nov., 1889, by Mr. and Mrs. H. M. Fitch (com. F. W. Anderson).

Rosellinia glandiformis.

On decaying wood of an old live oak stump, St. Martinsville, La., Feb., 1889. Langlois, No. 1768. Perithecia scattered, conic-hemispheric, black and roughish (granular), 1–1½ mm. diam. about ¼ part sunk in the wood, mostly with a slight reinforcement around the lower half of the projecting part like the cup of an acorn, but this is sometimes wanting. Ostiolum minute and inconspicuous. Asci cylindrical 100–114 x 8–10 μ. with numerous paraphyses. Sporidia 1–seriate, acutely elliptical, opaque (subhyaline at first), 14–15x 7–8 μ. Closely allied to *R. subiculata*, Schw. but perithecia more scattered and rather larger and the yellow subiculum wanting.

Rosellinia parasitica.

On dead limbs of *Symphoricarpus occidentalis*, Helena, Montana. Rev. F. D. Kelsey, No. 7. Perithecia gregarious, seated on the wood in transverse cracks of the bark or often on or among the collapsed perithecia of a sterile *Valsa* on the same limbs, ovate-globose, covered with short black spreading bristles at first but these soon disappear leaving the perithecia rough, ¼–⅓ mm. diam., smoother above with a broad papilliform, obtuse ostiolum. Asci cylindrical, 60–70 x 6 μ. (p. sp.) with abundant paraphyses. Sporidia uniseriate, oblong-elliptical, subobtuse, dark brown, 7–10 x 4–5 μ. This is certainly very near *R. detonsa* (Cke.) which Sacc. in Sylloge considers a var. of *R. ligniaria* (Grev.) but it differs in its perithecia more flattened above and in its constantly smaller spores.

Rosellinia kellermanni.

On rotten wood of *Negundo aceroides*, Manhattan, Kansas, March, 1889. Gregarious, superficial, perithecia subglobose about

$\frac{1}{5}$ mm. diam., clothed with short (15–22 μ.) straight, spreading bristles, except the papilliform ostiolum, finally nearly bare. (Asci long and slender, 5–spored sec. Kellerman and Swingle.) Sporidia elliptical or subglobose, 3–4 x 4–6 μ. Distinguished by its small sporidia.

Rosellinia langloisii.

On very rotten stem of *Vitis*, St. Martinsville, La., March, 1889. Langlois 1779 (p. p.). Perithecia scattered, erumpent, the base sunk in the wood, conic-hemispheric, $\frac{3}{4}$ mm. diam. smooth and shiny black. Ostiolum papilliform. Asci about 100 μ. long and 5–6 μ. thick with abundant paraphyses. Sporidia acutely elliptical, dark-brown, 2–nucleate, 1–seriate, 6–7 x 4 μ. Resembles *R. albolanata* but perithecia and sporidia smaller and the white farinose coat wanting.

Anthostoma ontariensis.

On dead limbs of *Salix*, London, Canada, Feb., 1890. J. Dearness 1390. Stroma convex $\frac{1}{4}$–$\frac{1}{2}$ mm. diam. more or less subseriately confluent often for several cm., formed of the unaltered substance of the bark and surrounded by a black circumscribing line which penetrates the wood. Perithecia crowded in the stroma, subglobose $\frac{1}{2}$–$\frac{3}{4}$ mm. diam. with thick coriaceous walls, contracted above into a narrow neck terminated by the subglobose, deeply quadrisulcate, erumpent, ostiola. Asci slender 8–spored, 90–110 μ. long (p. sp 75–80 x 8–10 μ.) with abundant paraphyses. Sporidia subbiseriate, cylindrical moderately curved, brown, 20–26 x 4–4$\frac{1}{2}$ μ. Has much the same general appearance as some compact forms of *Valsa stellulata*, Fr.

Anthostomella ludoviciana, Ell. & Lang.

On dead stems of *Smilax*, St. Martinsville, La., Jan., 1889. Perithecia gregarious, covered by the blackened cuticle which is pierced by the papilliform, minutely perforated ostiolum, 140–170 μ. diam. Asci 50–55 x 3–3$\frac{1}{2}$ μ. cylindrical, paraphysate. Sporidia oblong-elliptical, brown, mostly 2–nucleate, 4–6 (mostly 4–5) x 2–2$\frac{1}{2}$ μ. uniseriate. The perithecia are often in subseriate patches, lying so near as to touch each other but hardly coufluent and are buried in the substance of the bark or even in the denuded wood which is then continuously and uniformly blackened on the surface but not within. Distinguished from other allied species by its small sporidia.

Hypoxylon albocinctum.

On bark of dead *Crataegus*, Preston, Hamilton Co., Ohio, Jan., 1890. A. P. Morgan, No. 884. Stroma thin (1mm.), flat, carbonaceous, mostly orbicular, ¼–1 cm. diam., light cinereous at first soon purplish-black except the margin which remains light colored for some time, surface uneven from the projecting vertices of the perithecia which are ovate-globose, small (⅓–½ mm.), monostichous, moderately crowded, sunk nearly to the base of the stroma, contracted above into a short neck terminating in the minute papilliform ostiolum. Asci cylindrical, 80–100 x 5–6 μ. (p. sp. about 60 μ. long), with abundant paraphyses. Sporidia uniseriate narrowly elliptical, brown, 1–2 nucleate, subacute, 7–8 x 3½–4 μ. The bark beneath the stroma is whitened and surrounded by a black circumscribing line. The general appearance is like that of orbicular forms of *H. serpens*, from which it differs in its purplish stroma and smaller perithecia and sporidia.

Poronia leporina.

On rabbit dung, Emma, Mo., Sept., 1889. Rev. C. H. Demetrio, 250. Stipitate, flesh colored, small, stipe 1–2 mm. long, ½ mm. thick expanding above into a discoid stroma 1–2 mm. diam. and mamillose from the slightly prominent perithecia which are ovate-globose, about ⅓ mm. diam. 6–20 in a stroma. Ostiola large, black, convex. Asci clavate-cylindrical, 80–100 (p. sp. 75–80) x 10–12 μ. with obscure paraphyses. Sporidia at first greenish-hyaline 1–2 nucleate, becoming opaque, subinequilaterally elliptical mostly uniseriate, 12–15 x 6–7 μ.

Physalospora zeicola, E. & E.

On dead stalks of *Zea mays* exposed to the weather through the winter, Newfield, N. J., Apr., 1890. Perithecia gregarious minute (¼–⅓ mm.) covered by the cuticle which is slightly raised and pierced by the obtusely conical, black and shining ostiolum. Asci clavate-cylindrical, 75–80 x 12–15 μ. nearly sessile, with abundant paraphyses. Sporidia crowded-biseriate, elliptical or almond shaped, hyaline, granular. 18–20 x 8–10.

Physalospora conica.

On old canes of *Arundinaria*, St. Martinsville, La., Oct., 1888. Rev. A. B. Langlois, No. 1567. Perithecia gregarious, erumpent and superficial, conical, about ½ mm. broad and high. Asci oblong about 75 x 20 μ. with abundant paraphyses. Sporidia biseriate,

elliptical, hyaline, granular, often bulging on one side, 20–22 x 10–12 μ. The asci and sporidia are the same as in *Botryosphaeria fuliginosa* (in N. A. F. 475–481) but its scattered conical perithecia are quite different from any of the forms included under that name.

Physalospora pandani.

On leaf of *Pandanus*, in a greenhouse, Knoxville, Tenn., Jan., 1890. Prof. F. L. Scribner. Perithecia amphigenous, on large dull white spots with a purplish-red border, covered by the epidermis, subglobose, 150–200 μ. diam. membranaceous, of coarse cellular structure, the apex and papilliform ostiolum erumpent. Asci cylindrical, about 100 x 10 μ. with faint rudimentary paraphyses. Sporidia uniseriate or biseriate, hyaline, granular, oblong-elliptical, 18–20 x 7–8 μ.

Laestadia orientalis.

On dead leaves of "Japan Chestnut" *Castanea japonica* (cult.), LaFayette, La., March, 1889. Langlois, 1664. Perithecia amphigenous, depressed-hemispherical, 180–200 μ. diam. scattered, erumpent. Asci clavate-cylindrical, p. sp. 45–50 x 12 μ. or including the slender base 70–75 μ. long. Paraphyses none. Sporidia crowded-biseriate, inequilaterally-elliptical, hyaline, granular and nucleolate, 12–14 x 5–6 μ. There is also on the same leaves a *Septoria* with gregarious, subglobose 80–100 μ. perithecia and hyaline, nucleate subundulate, 12–25 x 1–1½ μ. sporules—agreeing with the description of *S. gilletiana* Sacc. in all but its smaller continuous sporules.

Laestadia apocyni, E. & E.

On dead stems of *Apocynum*, London, Canada, June, 1890. Dearness, 1734. Perithecia gregarious, depressed-spherical, 150–200 μ. diam. perforated above, covered by the cuticle through which they are visible by translucence. Asci clavate-cylindrical, 40–45 x 10–12 μ. Sporidia crowded-biseriate, oblong, 2–nucleate, obtuse, mostly a little curved, 10–15 x 5–6 μ.

Sphaerella conigena.

On scales of dead cones of *Abies douglasii*, Belt Mts., Montana, Sept., 1889. F. W. Anderson, 612. Perithecia gregarious on the back of the exposed tip of the scale, minute (74 μ.) buried except the black smooth conic-papilliform apex. Asci narrow clavate-cylindrical, gradually attenuated below, 75–80 x 5 μ. paraphyses none. Sporidia uniseriate, ovate, 1–septate and constricted at the septum

hyaline, 6–7 x 3–3½ μ. Differs from the usual type of *Sphaerella* in its narrow elongated asci.

Sphaerella spinicola.

On spines of *Rosa rubiginosa*, West Chester, Pa., July, 1889. Perithecia scattered or 3–4 together, minute 110–120 μ. collapsing, visible through the translucent epidermis as minute black specks, fringed around the base with scanty mycelium. Ostiolum papilliform. Asci oblong, sessile, about 45 x 12 μ. (p. sp.). Sporidia biseriate, oblong-elliptical, continuous, granular, rounded at the ends, 12–15 x 5–6 μ.

Sphaerella ciliata.

On dead stems of *Steironema ciliatum*, London, Canada, May, 1890. Dearness, 1650. Thickly gregarious. Perithecia subglobose, 150 μ. diam. covered by the cuticle but not sunk in the matrix, ostiolum papilliform. Asci clavate-cylindrical 40 x 7 μ. Sporidia, biseriate, clavate-oblong, hyaline, 1–septate and constricted 10–12 x 3 μ.

Sphaerella angelicae.

On dead stems of *Angelica atropurpurea*, London, Canada, June, 1890. Dearness, 1715. Perithecia scattered, growing under the bark and attached to it so that when the bark is peeled, off they come with it, globose, ¼ mm. diam., collapsing below, ostiola papilliform, barely piercing the cuticle and only slightly raising it. Asci clavate-cylindrical, with abundant paraphyses, 65–70 x 7–9 μ. Sporidia biseriate, oblong-elliptical, 2–nucleate, 12–15 x 3½ μ., becoming ovate-oblong and 1–septate.

Judging from the specimens in F. Eur. and F. G., this is different from *S. rubella*, Niessl.

Sphaerella maclurae.

On leaves of *Maclura aurantiaca*, Emma, Saline Co., Mo., Aug., 1889. Rev. C. H. Demetrio, 251. Spots red-brown with a definite, darker border 3–10 cm. diam. or by confluence more, very brittle, the central part paler and soon falling out. Perithecia innate with their vertices erumpent, small (75 μ.). Asci oblong-cylindrical 50 x 8–10 μ. without paraphyses. Sporidia biseriate, oblong-pyriform, constricted, slightly curved, 12–14 x 5 μ., ends subacute.

Sphaerella polifolia.

On living or partly dead leaves of *Andromeda polifolia*, London, Canada, Aug., 1889. J. Dearness. Perithecia epiphyllous on gray-

ish-black, indefinite spots 2 mm. or more in diam., erumpent, rough, minute, broadly pierced above. Asci oblong, 35–40 x 6–8 μ. without paraphyses. Sporidia biseriate, clavate oblong, 1–septate, 10–12 x 2½–3 μ.

Didymella canadensis.

On dead limbs of *Salix*, London, Canada, Jan., 1890. J. Dearness, No. 1378. Perithecia irregularly but thickly scattered, buried in the bark, which is slightly raised above them and pierced by the small, black, papilliform ostiola, white inside, globose, about ⅓ mm. diam. Asci clavate-cylindrical, 75–90 x 12–15 μ. with abundant paraphyses. Sporidia crowded-biseriate, cylindrical, obtuse, hyaline, 4–nucleate, constricted in the middle and slightly so near each end, 25–34 x 6–7 μ.

Didymella cornuta, E. & E.

On dead stems of *Asclepias cornuti*, London, Canada, Apr., 1890. Dearness, 1635. Perithecia scattered, minute 175–200 μ. diam. attached to the blackened surface of the stem just beneath the thin epidermis which is barely pierced by the prominent ostiolum. Asci cylindrical, nearly sessile, 65–70 x 7 μ. Paraphyses present. Sporidia, biseriate, fusiform, yellowish, very slightly curved, 1–septate and constricted, becoming 3–septate, 20–25 x 3–3½ μ. ends subobtuse.

Didymella andropogonis, E. & E.

On dead leaves of *Andropogon muricatus*, St. Martinsville, La., Apr., 1889. Langlois, 2209. Perithecia hypophyllous, subgregarious, about ½ mm. diam. buried in the substance of the leaf with the apex and short conic-cylindrical ostiolum projecting. Asci cylindrical, narrow, 80–90 x 5 μ. with filiform paraphyses. Sporidia overlapping uniseriate, fusoid-oblong, 3–nucleate, becoming 1–2 septate and constricted, acute at first but finally obtuse, hyaline or yellowish-hyaline, 12–15 x 3 μ. some of them very slightly curved. Near *D. subgemina* B. & C.

Didymella mali.

On the inner surface of loose hanging bark of living apple trees, Newfield, N. J., Dec. 8, 1889. Perithecia scattered about ¼ mm. diam. buried in the substance of the bark except the emergent rather acutely conic ostiolum. Asci clavate-cylindrical, about 70 x 7 μ. with abundant paraphyses. Sporidia biseriate, fusoid, slightly curved, about 4–nucleate not constricted 20–22 x 3 μ. ends acute.

Venturia parasitica.

Parasitic on old *Hypoxylon (perforatum)?* On bark of *Magnolia* near St. Martinsville, La., Jan., 1889. Langlois, 1781. Perithecia densely gregarious, globose, 90–100 μ. diam. collapsing above, sparingly clothed with spreading straight rigid continuous spines or bristles about 30 x 5 μ. Asci clavate-cylindrical about 25 x 5 μ. without any paraphyses. Sporidia oblique or (biseriate) oblong, 3–4–nucleate, hyaline, 6–8 x 2 μ.

Venturia sabalicola.

On dead leaves of *Sabal palmetto*, Bayou Chene, La., Oct., 1888. Langlois, 1546. Scattered or subgregarious. Perithecia globose, 125–135 μ. diam. pierced above, beset with stout straight black bristles 50–80 x 6–8 μ. Asci oblong-clavate 50–60 x 7–8 μ. without paraphyses. Sporidia fusoid-oblong, hyaline, 4–nucleate (becoming 1–septate)? 10–13 x 2½–3 μ. crowded biseriate.

Diaporthe columbiensis.

On dead limbs of some undetermined tree, British Columbia, April, 1889. Macoun, 32. Perithecia in subcircinate clusters of 3–6 (occasionally only one) buried in the inner bark, their bases penetrating to the subjacent wood, large (¾–1 mm.) collapsing below, abruptly contracted above into a short neck terminating in a subtubercular, quadrisulcate-cleft ostiolum erumpent (but not strongly prominent) through the thin, black, superficial convex crust that covers the stroma. The substance of the stroma consists entirely (except the black circumscribing layer) of the bleached substance of the bark. Stroma elliptical, 2–5 mm. diam. with a distinct black circumscribing line which does not penetrate deeply into the wood. Asci oblong-lanceolate, about 100 x 12 μ. Sporidia biseriate, hyaline, oblong 20–22 x 7–8 μ., 1–septate and constricted, each cell with a large nucleus.

Diaporthe (Euporthe) leucosarca.

On dead limbs of *Carpinus Americana*, London, Canada, May, 1890. Dearness, 1696. Perithecia thickly scattered, buried in the unchanged substance of the inner bark and covered by the gray epidermis which is raised in a pustuliform manner and pierced by the minute papilliform ostiola. Asci oblong-cylindrical, 80–110 x 20–22 μ. (without paraphyses)? Sporidia biseriate, broad-fusoid, hyaline, 1–septate and constricted, each cell with a large nucleus, 22

–30 x 8–10 μ. Perithecia about ½ mm. diam., white inside, stroma not limited by any dark circumscribing line.

Diaporthe crinigera.

On dead oak limbs, London, Canada, March, 1890. J. Dearness, 1347 B. Stroma cortical. Perithecia buried in the substance of the inner bark, subcircinate, 6–20 together, ovate-globose ⅓–½ mm. diam. contracted above into short, slender, convergent necks with the ostiola smooth and rounded or distinctly quadrisulcate and erumpent in a small compact fascicle. In well developed specimens the ostiola are cylindrical 1–2mm. long but quite as often they project only slightly above the epidermis. There is not a separate circumscribing line around each cluster of perithecia but one continuous thin black layer extends along just under the surface of the inner bark over the entire space occupied by the fungus. In the early stage of growth and where there are only a few perithecia in a cluster, the surface of the inner bark is smooth and even, but where the perithecia are more numerous and well developed they raise the bark into little flat pustules about 2 mm. diam. Asci 45 x 7–8 μ. (p. sp.) with paraphyses. Sporidia biseriate, oblong-fusoid, 4–nucleate, slightly constricted in the middle, ends subobtuse, 10–13 x 3–4 μ. This was at first referred to *Diaporthe woolworthii*, Pk. but having compared it with a specimen of that species from Mr. Peck we find it to differ in its larger and more numerous perithecia with long cylindrical ostiola and its broader sporidia ; nor is there any seriate arrangement in the clusters of perithecia or any circumscribing line or layer. Mr. Commons sends the same from Delaware (No. 1266) differing only in the clusters of perithecia being more or less longitudinally confluent.

Diaporthe comptoniae.

On *Comptonia asplenifolia*, Newfield, N. J., June, 1889. Perithecia subcircinate, buried in the inner bark, small (⅓ mm.), 10–20 in a group, globose, contracted above into a short neck ending in a short cylindrical, obtuse ostiolum with a round, entire opening, generally not projecting above the surface of the bark and scarcely visible. The ascigerous nucleus is whitish at first, becoming nearly black. The bark is raised into little pustules above the perithecia and these pustules soon become irregularly ruptured above. Asci oblong 35–40 x 7 μ. Sporidia biseriate, oblong, subinequilateral, 1–septate and slightly constricted at the septum, 10–12 x 3–3½ μ. yellowish-

hyaline. Accompanied by spermogonia with minute allantoid spores in a multilocular grayish-black stroma in pustules similar to those containing asci and sporidia. The ascigerous perithecia finally fall out (or are eaten out by insects)?

Diaporthe americana, Speg.

On dead shoots of *Magnolia glauca*, Newfield, N. J., Jan., 1889. Perithecia buried in the inner bark and partly sunk in the wood about ½ mm. diam. whitish or horn-color inside, the thin cylindrical ostiola either singly or oftener converging and bursting through the ruptured epidermis but scarcely projecting above it, their tubercular-cylindrical tips rounded and obtuse and more or less distinctly quadrisulcate-cleft. The stroma is formed of the unchanged substance of the wood which it penetrates deeply and is limited by a black circumscribing line. The perithecia are either irregularly scattered or in groups of 4–8. Asci 40–50 x 6–7 μ. without any distinct paraphyses. Sporidia oblong-fusoid, hyaline, 2–3–nucleate, finally 1–septate and slightly constricted, 10–12 x 3 μ. This agrees fairly well with the description of Spegazzini's species.

Diaporthe megalospora.

On dead wood of *Sambucus Canadensis*, Manchester, Mass., July, 1889. Wm. C. Sturgis. Perithecia globose, ½–¾ mm. diam. scattered, buried in the wood which is blackened on the surface but remains white within, abruptly contracted above and prolonged into a long (2–3 mm.) rough, subflexuous ostiolum. Asci (p. sp.) 70–90 x 10–12 μ. Sporidia biseriate, oblong-fusoid, slightly curved, 1–septate and constricted at the septum, each cell with 1 or 2 large nuclei, acute at the ends, 25–35 x 4½–5½ μ. Narrower than in *D. leucosarca*.

Didymosphaeria andropogonis, Ell. & Lang.

On dead culm of *Andropogon muricatus*, St. Martinsville, La., July, 1889. Langlois, 1814. Stroma consisting of the nearly unchanged substance of the culm which is a little whiter than the surrounding parts, 3–4 cm. long, 1 cm. broad, surrounded by a greenish-black line which penetrates deeply, the surface also being of a uniform slaty-black. Perithecia scattered, subglobose ½–¾ mm. diam., entirely buried except the convex-discoid, erumpent ostiolum. Asci cylindrical about 110 x 8–10 μ. with stout but evanescent paraphyses. Sporidia uniseriate, oblong-cylindrical, rounded at the

ends, slightly curved, 1–septate, hyaline at first, becoming brown, 18–22 x 4½–5½ μ.

Melanconis salicina.

On dead limbs of *Salix*, London, Canada, Jan., 1890. Stroma flat, thin, orbicular, about 2 mm. in diam. composed of the slightly altered substance of the bark which is not perceptibly elevated above it, surrounded by a black circumscribing line which does not penetrate below the surface of the wood. Perithecia 3–6 (exceptionally only one) in a stroma, large (¾ mm.), globose, membranaceous with a light colored nucleus, contracted above into short necks which terminate in a rather broad, round, concave ostiolum piercing the epidermis but scarcely rising above it. Asci broad lanceolate, 90–110 x 12–16 μ. (p. sp.) with abundant paraphyses. Sporidia crowded-biseriate, oblong–fusoid, 1–septate and slightly constricted, a little bent or curved, 40–60 x 8–10 μ. yellowish-hyaline with a short obtuse apiculus at each end. Spermogonia in a central perithecium in the middle of the stroma. The base of the perithecia is sunk in the surface of the subjacent wood.

Valsaria salicina.

On dead limbs of *Salix*, London, Canada, Jan., 1890. J. Dearness, No. 1312. Stroma subovate, 2–2½ mm. diam. buried in the bark, the upper part light colored within and projecting so as to form a brownish-black subhemispherical tubercle, 1–2 mm. across and less than 1 mm. high, minutely papillose above from the slightly projecting ostiola. The upper projecting part of the stroma is of a light horn-color inside. Perithecia 10–20 irregularly crowded in the bottom of the stroma, ovate globose, with thick coriaceous walls, contracted above into slender necks 1 mm. or more long, terminating above in the papilliform ostiola. Asci slender 70–80 x 5–6 μ. (p. sp.). Paraphyses abundant, longer than the asci. Sporidia obliquely 1–seriate, oblong, crowded, cylindrical, 2–nucleate, brown, 1–septate, 10–12 x 3½ μ. Allied to *V. anthostomoides*, Sacc.

Leptosphaeria maclurae.

On leaves of *Maclura aurantiaca*, Emma, Saline Co., Mo., Aug., 1889. Rev. C. H. Demetrio. Spots as in *Sphaerella Maclurae*, E. & E. (which occurs on the same leaves) suborbicular reddish-brown, 4–10 mm. diam. with a darker margin and deciduous center. Perithecia mostly hypophyllous, innate-erumpent, small (75 μ.), black. Asci oblong-cylindrical, 50–60 x 8–10 μ. Paraphyses? Sporidia

biseriate, fusoid, about 6–nucleate becoming 5–septate, slightly curved, nearly hyaline, 20–22 x 3 μ.

Leptosphaeria steironematis.

On dead stems of *Steironema ciliatum*, London, Canada, May, 1890. J. Dearness. Perithecia gregarious around the nodes of the stem, subepidermal, conic-hemispherical, ½ mm. diam. raising the epidermis which is pierced by the obtusely conic ostiolum.

Asci clavate-cylindrical, 75–100 x 15–20 μ., with abundant filiform paraphyses. Sporidia biseriate, oblong, 3–septate, sometimes slightly constricted at the septa, brown, obtuse at the ends, mostly a little curved, 15–22 x 7–8 μ.

Leptosphaeria brunellae.

On dead stems of *Brunella vulgaris*, London, Canada, May, 1890. Dearness, 1712. Perithecia scattered, minute (⅓–¼ mm.) covered by the epidermis which is only slightly raised and barely pierced by the papilliform ostiolum. Asci clavate-cylindrical, 75–80 x 10–12 μ. subsessile with filiform paraphyses. Sporidia biseriate, fusoid, slightly curved, pale yellowish-brown, 3–septate, the next to the upper cell swollen, 22–30 x 4 μ. Differs from *L. pyrenopezizoides*, Sacc., in its perithecia not collapsing and from *L. parietariae*, Sacc., in its paler spores.

Accompanied by perithecia containing fasciculate acicular stylospores (Rhabdospora), 40–55 x 2–2½ μ. These perithecia are white inside and rather larger. Other smaller perithecia contain spores 4 x 1½ μ. (*Phoma*).

Leptosphaeria folliculata.

On leaves of *Carex folliculata*. On pale white elliptical spots 2–4 x 1–1½ mm. Perithecia buried in the substance of the leaf with their apices slightly prominent, few on a spot (1–6), small 60–75 μ. diam. Asci clavate-cylindrical, 50 x 10–12 μ. Spor. biseriate, oblong or clavate-oblong 2–septate and slightly constricted at the septa, 12–15 x 3 μ. yellowish-brown, ends obtuse. Differs from the other species on *Carex* in its distinct spots and smaller sporidia.

Metasphaeria rubida.

On a decaying log of *Platanus occidentalis*, Flatbush, Long Island, N. Y., Dec. 31, 1889. Rev. J. L. Zabriskie, 384. Perithecia gregarious, globose, minute (¼ mm.), sunk in the surface of the wood with their apices and obtusely-conic ostiola projecting. On carefully shaving off the ostiola the upper part of the perithecium is seen to

be filled with carnose bright flesh-red material which is also often visible through the broadly perforated ostiola. The lower part of the perithecia is white inside. Asci clavate-cylindrical, 75–80 μ. long (p. sp. about 40 x 12 μ.). Paraphyses abundant, longer than the asci. Sporidia crowded-biseriate, oblong-fusoid, slightly curved 3–septate, the next to the upper cell swollen, hyaline, 20–22 x 3½–4½ μ. The upper part of the perithecia seems to be covered (as in *Clypeosphaeria*) with a more or less distinct cap of black carbonaceous matter which is irregularly ruptured by the emergent ostiolum.

Pleospora diaportheoides.

On old stems of parsley (*Petroselinum*), Newfield, N. J., May, 1890. Perithecia scattered, depressed-hemispherical, about 200 μ. diam. erumpent-superficial, with a short, stout, cylindrical ostiolum. Asci clavate-cylindrical, 75–85 x 12–15 μ. with stout, jointed paraphyses. Sporidia subbiseriate, oblong-elliptical, yellow-brown, 3–septate with one or more of the cells divided by a longitudinal septum, not constricted at the septa, about 15 μ. long (14–18 x 7–8 μ.).

Pleospora hyalospora.

On leaves of *Lathyrus sativus* (1348) and *Pisum sativum* (1370). Starkville, Miss., May and June, 1890. S. M. Tracy. Perithecia scattered, depressed-hemispherical, 75–90 μ., of coarse cellular structure, at first sunk in the parenchyma of the leaf, finally more or less erumpent-superficial, with a papilliform ostiolum. Asci oblong, 75–85 x 35–40 μ., 8–spored. Sporidia oblong or slightly ovate-oblong, 3–6–septate (mostly 5–septate), with one or more longitudinal septa more or less distinct, nearly hyaline, ends obtusely pointed or rounded slightly constricted at the septa, especially at the middle one, 25–40 (mostly 25–30) x 12–15 μ. Differs from *P. Pisi* (Sow.) in its obovate asci, nearly hyaline sporidia and more delicate smaller perithecia.

Pyrenophora zabriskieana.

On bark of *Ulmus Americana*, New Baltimore, N. Y., Apr., 1872. Rev. J. L. Zabriskie, No. 108. Perithecia loosely gregarious, erumpent-superficial, ovate-globose, 175–200 μ. diam. densely clothed with straight, erect, sparingly-septate, yellowish-brown hairs 100–125 μ. long and about 5 μ. thick at the base tapering gradually to the subacute tip, of membranaceous texture and dark yellowish-brown color (under the microscope). Asci clavate-oblong, 100–112 x 22–25 μ. rounded above, with a short, abrupt, stipitate base.

Paraphyses slender and numerous but inconspicuous. Sporidia crowded-biseriate, ovate-elliptical, densely muriform, rounded at the ends, yellowish-brown 22–30 x 12–14 μ. constricted across the middle. The sporidia are so closely and densely muriform as to appear granular, the granular contents being arranged in transverse lines across the sporidia so that they appear 12 or more septate. Differs from *P. polyphragmia*, Sacc. to which it comes nearest in its smaller perithecia and shorter sporidia.

Fenestella amorpha.

On dead hickory limbs, Lyndonville, N. Y., Apr., 1888. Dr. C. E. Fairman. Stroma tuberculiform, seated on the wood, variable in size from 1mm. inclosing a single perithecium to 3 or 4 mm. with 4–6 perithecia, or sometimes confluent in a seriate manner for 1 cm. or more, black outside, whitish within, mostly depressed-hemispherical with the stout, cylindrical ostiola rising from the apex or bursting out through cracks in the bark but scarcely projecting. Asci cylindrical 150 x 15 μ. (p. sp. 100–110 x 15) with abundant paraphyses. Sporidia uniseriate, elliptical, 5–6–septate and muriform, becoming almost opaque, so that the septa are hardly visible. 20–22 x 12–14 μ. When the bark falls away the stroma becomes superficial.

Ophiobolus trichisporus.

On dead culms of grass, London, Canada, June, 1890. Dearness, 1734. Erumpent-superficial. Perithecia ovate-conic, ¼ mm. or less in diam. attenuated above into the acute short-beaked ostiolum. Asci, 170–200 x 3 μ. Sporidia filiform multinucleate, nearly as long as the asci. Differs from *O. stictisporus* E. & E. principally in its acutely beaked perithecia.

Ophiobolus medusæ, E. & E. J. M. I., p. 150. var. **minor** E. & E.

In leaves of *Andropogon muricatus*, St. Martinsville, La., Feb., 1889. Langlois, No. 1771. Differs from the specimens on *Spartina* in its erumpent larger ostiolum and smaller asci and sporidia which are 110–120 x 7–8 μ. and 90–110 x 2½ μ. respectively. The perithecia, mode of growth, etc., are the same as in the original specimen.

Melanomma commonsii.

Parasitic on *Hypoxylon sassafras*, Wilmington, Del., Jan., 1890. Commons, 1258. Perithecia gregarious, ovate-globose, rough, black, minutely tomentose-pubescent when young, 110–125 μ. diam. Os-

tiolum papilliform. Asci clavate-cylindrical 50–55 x 7–8 μ. with abundant filiform paraphyses. Sporidia biseriate, fusoid-oblong, 3–septate, slightly constricted at the septa, olive-brown 12–14 x 3–3½ μ.

Melanomma tetonensis.

On bark of *Artemisia cana*, Valley of the Teton river in northern Montana, July, 1889. Anderson, 551. Perithecia scattered, erumpent-superficial, ovate-globose, nearly smooth, ½–¾ mm. diam. collapsing above. Ostiolum narrow and only slightly prominent. Asci clavate-oblong, 75–80 x 18–20 μ. with abundant paraphyses. Sporidia crowded, subbiseriate, fusoid-cylindrical, slightly curved, yellow, 5–septate, 22–27 x 6–7 μ. ends acute while lying in the asci, obtuse when free. This differs from *M. occidentalis* (Ell.) in its scattered mode of growth and larger perithecia and sporidia, the latter being constantly 5–septate and not constricted at any of the septa. It might be considered a var. of that species.

Melanomma parasiticum.

On old *Diatrype stigma*, Newfield, N. J., April, 1889. Perithecia scattered or gregarious, superficial, ovate-hemispherical, 110–130 μ. diam. roughish, black. Ostiolum papilliform soon perforated. Asci oblong cylindrical 40–50 x 8–10 μ. sessile, without paraphyses. Sporidia crowded-biseriate, oblong-fusoid, 3–septate, and finally slightly constricted at the septa, 10–12 x 3–4 μ. pale olivaceous. *Sphaeria nigerrima*, Blox. (Cke. Hndbk. No. 2612) which is also parasitic "on various species of *Diatrype*" has sporidia 12½–20 μ. long and at length multiseptate and perithecia "sprinkled with short stiff bristles." Our specimens of *M. vile* Fckl. have the perithecia larger and differ otherwise. *Melanomma subsparsum* Fckl. which we have not seen is said to have yellow sporidia.

Winteria tuberculifera.

On bark of wild plum (*Prunus*) London, Canada, 1890. Dearness, 1533. Perithecia gregarious, superficial, ½ mm. diam. depressed-globose, narrowed below, tubercular roughened, collapsed and cup-shaped when dry, black. Asci 35–40 x 5–6 μ. Sporidia crowded-biseriate, fusoid-oblong, hyaline 2–4 nucleate 6–8 x 2–2½ μ. (becoming 1–3 septate)?

Cucurbitaria kelseyi.

Perithecia large (¾–1 mm.) rough, subglobose, regularly rounded above with a papilliform ostiolum, bursting through cracks in the bark in elongated tufts, crowded and subconfluent, connected below

by a scanty grayish-black stroma. Asci cylindrical 170–190 x 15–20 μ. contracted below into a short stipe-like base. Paraphyses filiform, abundant. Sporidia uniseriate oblong-elliptical straw-yellow, becoming dark brown, contracted in the middle with three principal septa and several fainter ones (7–9 in all), muriform, 25–30 x 14–16 μ. ends at first obtusely pointed, finally rounded. Three main transverse septa are the only distinct and decided ones, the others both transverse and longitudinal being more or less indistinct and interrupted. On *Philadelphus lewisii?* Helena, Montana, March, 1889. Rev. F. D. Kelsey, No. 38. This is with difficulty distinguished from *C. berberidis,* Gray and might perhaps better be considered a var. of that species from which it seems to differ in its broader sporidia. The ascigerous perithecia were accompanied by others inclining more to ovate, with a short conic-cylindrical ostiolum and filled with very minute (1½–2 x ½ μ.) spores.

Cucurbitaria fraxini.

On bark of dead *Fraxinus,* London, Canada, Feb., 1890. J. Dearness, 1461. Perithecia globose, rough, black (white inside), ½ mm. diam. flattened above, with a papilliform ostiolum, seated on the surface of the inner bark in compact clusters of about 8–12 and surrounded by the ruptured epidermis. Asci cylindrical, p. sp. about 150 x 12–15 μ. with a short, stipe-like base and surrounded by numerous paraphyses. Sporidia uniseriate or subbiseriate, ovate-oblong, constricted in the middle, 5–6 septate and muriform, yellowish-brown, 25–30 x 10–14 μ.

Cucurbitaria setosa, E. & E.

Parasitic? on the tubercular, erumpent stroma of some *Diatrype,* on dead limbs of Wild Plum (*Prunus*), London, Canada, March, 1890. Dearness, 1493. Stroma black, carnose, 2–3 mm. across, its convex surface thickly covered with the minute parasitic? perithecia which are subglobose about ⅛ mm. diam., clothed laterally with stout black, spreading spines, 25–40 x 7 μ. Ostiolum either smooth and subpapilliform or more or less distinctly radiate-sulcate. Asci oblong clavate 45–55 x 12 μ. (p. sp.), contracted below into a narrow, stipe-like base. Paraphyses longer than the asci, evanescent. Sporidia biseriate, subrhomboidal-oblong, hyaline and multinucleate at first, becoming yellowish, 3–5–septate and submuriform, 12–15 x 4–5 μ. Accompanied by *Cornularia Persicae,* (Schw.) The crowded perithecia bear a general resemblance to those of *Plowrightia mor-*

bosa, Schw. from which, however, this is quite distinct. The stroma is carnose and black inside and out, and in the bark beneath it are buried the numerous small abortive perithecia of a *Diatrype* or *Valsa*.

Teichospora mammoides.

On dead stems of *Sarcobatus vermiculatus* near Great Falls, Montana, July, 1889. F. W. Anderson, 542. Perithecia erumpent-superficial, gregarious, depressed-hemispherical, brownish-black, $\frac{3}{4}$ mm. diam. with a prominent nipple-like black ostiolum. Asci clavate-cylindrical, subsessile, 100–110 x 12–15 μ. with abundant filiform paraphyses. Sporidia uniseriate, ovate-oblong 5–7 septate and muriform, scarcely constricted, yellow becoming brown, 20–22 x 9–11 μ.

Teichospora mycogena.

Parasitic on old *Diatrype stigma*, Newfield, N. J., Apr., 1889. Scattered immersed except the partially erumpent apex which slightly raises the surface of the Diatrype stroma rupturing it in a subradiate manner. Perithecia of medium size with an indistinct ostiolum. Asci subcylindrical about 100 x 12 μ. abruptly contracted below into a short stipe. Sporidia biseriate, ovate-oblong, with three distinct transverse septa and a longitudinal septum across one or more of the cells, yellowish becoming dark brown, distinctly constricted at the middle septum and when mature 5–6–septate, 12–15 x 6–8 μ. This might be mistaken for *Lophiostoma floridanum* E. & E. but that has the perithecia more superficial and quite different sporidia.

Teichospora umbonata.

On dead branches of *Symphoricarpus occidentalis*, Helena, Montana, March, 1889. Rev. F. D. Kelsey, No. 7. (in part). Perithecia gregarious, discoid, about $\frac{1}{3}$ mm. diam. seated on the surface of the inner bark exposed by the falling away of the epidermis, ostiolum tuberculiform. Asci cylindrical 75–80 x 7–8 μ. with paraphyses. Sporidia uniseriate, ovate, 3–septate, constricted at the middle septum, straw-yellow, 12–15 x 6–8 μ. Most of the sporidia show only the three transverse septa but in some of them one or both the inner cells are divided by a longitudinal septum. It is not improbable that the sporidia may finally become brown and acquire additional septa.

Teichospora papillosa.

On weather beaten dead decorticated limbs of *Salix*, Helena, Montana, Feb., 1889. Rev. F. D. Kelsey, No. 4. Gregarious, sub-

superficial, depressed-globose, ½ mm. diam. strongly papillose-roughened with a few short weak glandular hairs when young, finally collapsing above, ostiolum papilliform, not conspicuous. Asci oblong, 75–85 x 20–24 μ. nearly sessile, paraphyses evanescent. Sporidia crowded-biseriate, 8 in an ascus oblong or slightly clavate-oblong, a little curved, obtuse at the ends. Mostly 5–septate with one or two of the cells divided by a longitudinal septum, hyaline becoming yellow-brown, 22–30 x 10–11 μ.

Teichospora megastega.

On bark of old weather-beaten willow limbs and also on the wood. Helena, Montana, Feb., 1889. Kelsey, No. 4 (pr. p.) and on *Acer glabrum*, Kelsey No. 49. Perithecia gregarious, subsuperficial, the base sunk in the wood or bark with about two-thirds of the upper part projecting, hemispheric-globose, ¾–1 mm. diam. rough, ostiolum inconspicuous, subpapilliform. Asci cylindrical 175–200 x 15 μ. with a short stipe-like base and abundant paraphyses. Sporidia 1–seriate, about 7–septate and muriform, mostly constricted in the middle more or less distinctly, ends rounded or obtusely pointed, 25–36 x 12–15 μ. Closely allied to *T. obducens*, but perithecia less crowded, more depressed, larger and rougher and sporidia rather larger.

Teichospora helenae.

On decorticated weather-beaten limbs of *Salix*, Helena, Montana, Feb., 1889. Rev. F. D. Kelsey, No. 4 (in part) also on wood of *Prunus Virginiana*, F. W. Anderson. Perithecia gregarious, semi-erumpent, ½–¾ mm. diam. granular-roughened, collapsing above, ostiolum minute. Asci clavate-cylindrical, 112–120 x 10–12 μ. rather abruptly contracted below into a short stipe-like base and surrounded with abundant paraphyses. Sporidia uniseriate, ovate-oblong, brown, constricted in the middle, 5–7–septate and with one or two of the intermediate cells divided by a longitudinal septum 15–25 x 8–12 μ. Quite often asci are seen in which the sporidia are smaller, black and shriveled as if struck with blight before maturity. Closely allied to *T. patellarioides*, Sacc. but differs in its larger globose-hemispherical perithecia without any fringe of hyphae at the base and in its 5–7septate sporidia uniseriate in narrower asci.

Teichospora kansensis.

On outer bark of cottonwood trees, Kansas, Coll. Dr. G. Egeling Com. Dr. J. W. Eckfeldt. Perithecia scattered, minute (120–

175 μ.), conic-hemispheric, base slightly sunk in the bark, ostiolum papilliform. Asci oblong 75–80 x 12 μ. sometimes shorter and broader (45–50 x 15 μ.). Sporidia biseriate, ovate oblong, pale brown, 3–septate, finally 6–septate and slightly constricted across the middle, lower end subacute, about 20 x 8–9 μ. *Teichospora pruniformis* (Nyl.) which is also found on bark of poplar and willow is much larger (½ mm. diam.).

Nectria diplocarpa.

On thallus of some foliaceous lichen (*Parmelia*)? on trunk of a tree, Farmington, N. Y., Dec., 1888, Edgar Brown, No. 17. Perithecia gregarious or subcespitose (2–3–connate) superficial, ovate, about ¼ mm. diam. clothed with white septate, sparingly branched, substrigose hairs, collapsing more or less distinctly above, deep flesh color, ostiolum papilliform, large and distinct, smooth. Asci clavate, 40–50 x 8–12 μ. filled with reddish granular matter at first, then containing 4 oblong elliptical, hyaline spores, 8–12 x 4–5 μ., 1–septate and more or less constricted at the septum, ends rounded and obtuse, lying irregularly in the asci. Paraphyses apparently present but very obscure as are also the asci which are soon dissolved. Together with the sporidia already described are others much larger, 30–45 x 18–25 μ. granular, hyaline, 1–septate and strongly constricted at the septum, oblong-elliptical in shape with the ends obtuse and rounded. It is not easy to see just how these large spores originate but there is good reason to believe them true ascospores as in several instances asci were seen containing, in addition to the smaller sporidia, a single sporidium intermediate in size between the smaller and the larger ones. Only one of the larger intermediate sized spores was seen in the same ascus and as far as we could judge only one of these large sized spores was produced in an ascus, though when the spore had reached the largest size mentioned the ascus which contained it had disappeared. If this is the correct view the large spores are normal and mature and the smaller ones undeveloped and immature. In examining our Exsiccati we find that specimens collected in Missouri by Demetrio on thallus of *Parmelia* and issued by Dr. Winter in his Rabenhorst-Winter Fungi, No. 3252, as *Nectria lecanodes* Rabh. are the same as this. The description, however, of *N. lecanodes* does not apply to this, that species having sporidia only 9–11 x 3–4 μ. and in fact the specimen of *N. lecanodes* in DeThumen's Mycotheca, 1746 and Fungi Gallici, 665 (both collected by Madame Libert) as well as those in Rehm's Ascomy-

cetes, No. 38 and Plowright's Fungi Britannici 212, have the sporidia 8–12 x 3–4 μ. The New York and Missouri specimens also differ from those just cited in their brighter red color and distinctly hairy perithecia and come nearer to *N. erythrinella*, Nyl. which again has the perithecia only partially emergent and sporidia 18–25 x 6–8 μ. much larger than in *N. lecanodes* it is true but still far too small. Possibly this variability in the size of the sporidia is only accidental but from its occurrence in specimens from such widely separated localities there is reason to consider it normal and if so, characteristic of a species not heretofore described.

Hypocrea pallida.

Specimens of this species found by Dr. John Macoun in Prince Edwards Island, parasitic on *Polyporus chioneus* Fr. agree perfectly with the Newfield specimen (J. M. II, p. 65) only there is an orange colored mycelium which stains the Polyporus within, of a fine light yellow.

Hypocrea melaleuca.

On decaying oak limbs, Newfield, N. J., Jan., 1889. Subiculum, membranaceous, thin, white, covered except the margin with a single layer of minute (112–130 μ.) slate-colored perithecia filled with globose 2½–3 μ. sporidia? (or perhaps stylospores) as no asci were seen. This seems to be a distinct species but requires further observation with more perfectly developed specimens.

Calonectria dearnessii.

On decaying branches, London, Canada, Jan., 1890. J. Dearness, No. 1346. Cespitose on the ostiola of some *Massaria* on ash and elm. Perithecia 3–12 in a cluster, ovate, narrowed above and below, light orange-yellow, about ⅛ mm. diam. and a little more than that in height, seated on a white, radiate-fibrous, silky mycelium which at first partially envelops and clothes the perithecia but finally disappears. Ostiola broad papilliform not distinctly prominent, at length slightly collapsing. Asci 75–80 x 10–12 μ. with paraphyses. Sporidia oblong-cylindrical, obtuse, yellowish-hyaline, biseriate, 3–5–septate, more or less constricted at the septa, 25–35 x 6–7 μ. ends obtuse, slightly curved. This differs from *N. fulvida* E. & E. in several particulars.

Thyronectria chrysogramma.

On bark of *Ulmus Americana*, Manhattan, Kansas, March, 1889. Kellerman and Swingle, No. 1421. Also on elm limbs

Potsdam, N. Y., 1857. Perithecia cespitose, ovate, $\frac{1}{3}$–$\frac{1}{2}$ mm. diam. seated on the surface of the inner bark without any evident stroma and bursting through the epidermis in compact groups of 3–6, densely clothed with a greenish-yellow farinaceous coat, only the prominent ostiolum becoming bare and black. Asci clavate-cylindrical, 150–175 x 14–18 μ. with abundant paraphyses. Sporidia biseriate, oblong-elliptical, mostly a little curved, 7–10–septate with very faint interrupted longitudinal septa, hyaline at first, finally quite dark brown, 20–30 x 10–12 μ. The sporidia are certainly muriform though the longitudinal septa are very faint. We at first supposed this to be the mature state of *Nectria aurigera* B. & Rav. but a careful examination of the specimens of that species in N. A. F. and Rav. F. Am. failed to reveal any longitudinal septa in the sporidia which as well as the perithecia are also smaller than in this though apparently mature. Near *Th. virens*, Hark.

Chilonectria crinigera.

On bark of dead *Fraxinus viridis*, Lincoln, Nebraska, Nov., 1888. H. J. Webber, No. 18. Perithecia cespitose 3–12 on a tubercular stroma in compact clusters 1–2 mm. across, the single perithecia subglobose and about $\frac{1}{2}$ mm. in diam. covered at first with a brownish farinaceous coat, becoming nearly black, rounded and obtuse above with a papilliform ostiolum which is slightly collapsed when dry. Asci clavate-cylindrical, 65–75 x 12–15 μ. rounded and obtuse above, contracted below into a stipitate base and overtopped by the abundant paraphyses. The asci are at first filled with innumerable minute (3 x $\frac{1}{2}$ μ.) allantoid hyaline sporidia but in what we take to be the mature state these minute sporidia appear to be transformed into eight biseriate, globose yellowish-hyaline, 5–7 μ. diam. sporidia which while lying in the asci are faintly marked with radiating lines and when free are surrounded with about a dozen radiating hyaline filaments 8–10 μ. long and extending out from all sides of the sporidium like rays from a star.

Nectria sambuci.

On *Sambucus Canadensis*, Lincoln, Nebraska, Aug., 1888. H. J. Webber. Cespitose on a tubercular base (*Tubercularia Sambuci*, Cda.). Perithecia 4–12 on a stroma, ovate-globose, pruinose pale red, about $\frac{1}{3}$ mm. diam. Strongly collapsed above when dry. Ostiolum papilliform, finely fimbriate. Asci oblong clavate 50–60 x 6–7 μ. (p. sp.) without paraphyses. Sporidia biseriate oblong, uniseptate, straight or slightly curved, hyaline 12–20 x $3\frac{1}{2}$–$4\frac{1}{2}$ μ. The

Tuberculuria has allantoid hyaline conidia 6–8 x 1½–2 μ. on basidia 35–40 μ. long, branched above. This is according to the specimens in DeThumen's Mycotheca and in Fungi Gallici the *T. sambuci* Cda. We are not aware that its ascigerous state has ever been observed before.

Nectria athroa.

On decaying sycamore log, Manhattan, Kansas, Feb., 1889. Kellerman and Swingle, No. 1325. Densely gregarious. Perithecia ovate, 150–200 x 110–120 μ. dark red, smooth or nearly so, not collapsing. Asci (p. sp.) about 35 μ. long cylindrical, evanescent. Sporidia uniseriate, oblong-elliptical, hyaline, obtuse at the ends 1–septate and slightly constricted, 5–6 x 2½ μ. This has the general appearance of *N. ditissima*, Tul. but besides the more regularly shaped perithecia the sporidia are much smaller. The asci are with difficulty seen so that this might be taken for a stylosporous fungus only from the fact that here and there series of eight spores lying end to end indicate the presence of asci.

Nectria mammoidea, Phill. & Plow.

This species was found at Newfield some years ago on outer bark of living apple trees and again Dec., 1888 on outer bark of living Quince trees. The Newfield specimens agree with authentic specimens from Plowright in all respects only the sporidia are a little smaller (15 x 5–6 μ.). In Plowright's specimens they are 18–22 x 6–7 μ. and subinequalateral. The Newfield specimens were immature, the asci being mostly filled with granular matter.

Nectria pithoides.

On dead alders, British Columbia, May, 1889. Macoun, 122. Densely cespitose forming suborbicular tufts, 1½–2½ mm. diam. Perithecia ovate, dark red, about ⅓ mm. diam. muriculate-roughened, collapsing above so as to appear truncate, but only slightly concave, appearing in profile like small jars. Ostiolum papilliform only slightly prominent. Asci cylindrical, 75–80 x 5 μ. Paraphyses not seen. Sporidia 1–seriate, oblong-elliptical 2–nucleate, becoming 1–septate 6–10 x 3–3½ μ., smoky hyaline. The perithecia are seated on a convex yellow stroma 50–100 together and when young are clothed with a few short white glandular hairs. Nearly allied to *N. microspora*, C. & E. which has less numerous paler red, smoother, more irregularly collapsed perithecia. The specific name from Grk. *pithos* a barrel.

Nectria sulphurata.

On dead wood of *Populus tremuloides*, Sand Coulee, Montana. May, 1889. F. W. Anderson, No. 496. Perithecia gregarious, minute ($\frac{1}{5}$ mm.) subglobose with a slightly contracted base, covered with a sulphur-yellow granulose-pruinose coat which finally disappears and leaves the perithecia black; collapsed above when dry and more or less distinctly radiate-sulcate. Asci subcylindrical, 65–70 x 6–7 μ. Sporidia subbiseriate, allantoid, hyaline, with a small nucleus near each end, slightly curved, 9–12 x 2 μ. Differs from *N. aurea* S. & S. in its smaller sporidia.

Homostegia kelseyi.

On dead stems of *Ribes rotundifolia*? Helena, Montana, Jan., 1889. Rev. F. D. Kelsey, No. 3. Sent also by Mr. F. W. Anderson, apparently on a different species of *Ribes* (No. 398). Perithecia gregarious or cespitose or united 3–6 together in an imperfect stroma, often transversely seriate through cracks in the bark, ovate $\frac{1}{2}$–$\frac{3}{4}$ mm. diam. with a conic or cylindric-conic, stout ostiolum which is sometimes imperfectly radiate-sulcate. Asci cylindrical, 150–190 x 8–9 μ. with paraphyses. Sporidia uniseriate, hyaline, oblong-cylindrical 3–septate, straight, obtuse, 15–20 x 7–9 μ.

Dothidea bigeloviae.

On dead stems of *Bigelovia*, Helena, Montana, Nov., 1888. Rev. F. D. Kelsey, No. 141. Stromata depressed-tubercular, suborbicular, about 1 mm. diam smooth and black, gregarious, partly sunk in the bark of the dead stems. Ascigerous cavities peripheric, minute, numerous. Asci oblong 40–50 x 12 μ. soon disappearing. Sporidia subbiseriate, 1—septate, constricted at the septum, 15–20 x 7–10 μ.

Plowrightia staphylina, E. & E.

On bark of *Staphylea trifolia*, London, Canada, March, 1890. Dearness, 1560. Cespitose, clusters of perithecia about 1 mm. diam. mostly seriately confluent for several centimeters in length, erumpent through cracks in the bark and only slightly prominent. Perithecia black, small, 150–200 μ. diam. ovate or obovate, narrowed below into a substipitate base. Ostiolum conic-papilliform, soon broadly and somewhat irregularly perforated. Asci clavate-cylindrical, subsessile, paraphysate, 60–65 x 8 μ. Sporidia mostly biseriate, oblong or clavate-oblong, hyaline, 1–septate and slightly constricted, 12–15 x 4–5 μ., ends obtuse.

Plowrightia symphoricarpi.

On dead branches of *Symphoricarpus occidentalis*, Sand Coulee, Cascade Co., Montana, Dec., 1888. Anderson, No. 210. Stroma convex, penetrating to the wood but not limited by any black circumscribing line, brownish-black, whitish within, 1½–2 mm. diam. Perithecia 10–15 in a stroma, ⅓ mm. diam. the upper part mostly prominent and free. Sometimes the stroma is wanting, the perithecia being then simply cespitose or subsolitary. Ostiola obtusely conic, nearly smooth or indistinctly radiate-sulcate. Asci clavate-cylindrical, subsessile, 75–80 x 12 μ. with paraphyses. Sporidia uniseriate or subbiseriate above, ovate-elliptical, 1–septate and constricted, hyaline and granular at first, becoming yellow-brown, 15–18 x 8–10 μ.

Curreya shepherdiae.

On dead limbs of *Shepherdia argentea*, Valley of the Teton, Northern Montana, July, '89. Anderson, 539. Perithecia 4–6 together in a loose imperfect brown stroma, ovate, white inside, their short, obtuse ostiola, rupturing and slightly raising the epidermis and forming little black pustules scattered irregularly over the branch. Asci clavate-cylindrical, 100–110 x 15 μ. with obscure paraphyses. Sporidia 1–seriate, obovate 3–5–septate and muriform, slightly constricted in the middle, yellow, 18–22 x 10–12 μ.